Author(s)
Braun[1] PM, Böhler[1] G, Baezner[2] H, Bross[1] S, Scheepe[1,] JR, Alken[1] P, Juenemann[1] P

Institution, city, country

[1]Dept of Urology, [2]Dept. of Neurology, Klinikum Mannheim gGmbH, Mannheim, Germany

Title (type in CAPITAL LETTERS, leave one blank line before the text)

ALTERATIONS OF CORTICAL ELECTRICAL ACTIVITY IN PATIENTS WITH NEUROMODULATOR

Introduction & Objectives: Neuromodulation represents chronic stimulation of the posterior root of S3. A sacral reflex mechanism as well as pontine or cortical centres of modulation have been postulated However, so far, the mechanism and locus of stimulation have not been defined. Our aim was to evaluate possible alterations in cortical electrical activity.

Materials & Methods: We analyzed the cortical electroencephalogram (EEG, Kölner Vitaport System) for electrodes placed at Fz, Cz, Cz' and Pz in 6 patients on 3 different days. Subsequently, the posterior root of S3 was stimulated for a 10-minute period at 10-second intervals by means of an impulse generator (Medtronic, Interstim 3023; stimulation parameters: 1.0 V, 15 Hz, impulse duration 210 ms). This was followed by a stimultion break lasting 10 seconds. Raw data was analyzed by Matlab 4.0 software and our own averaging routine.

Results: All patients demonstrated an EEG potential following stimulation with a mean latency of 256 ms and a mean amplitude of 12.6 mV and with a maximum at Cz, corresponding to the postcentral gyrus

Conclusion: In patients with a neuromodulator and using an "on-off paradigm", an EEG-potential can be reproduced with a maximum at the sensory cortical area. With regard to latency, amplitude and configuration this can be compared to the so-called "event-related potentials". Otherwise, it is distinctly different from pudendal somatosensory evoked potentials in the diagnostic evaluation of bladder or sexual dysfunction. Further investigations will clarify whether the site of modulation is located in the cortex or in pontine areas.

Type your text within this frame. If 2nd page is needed use Abstract Form A-2.